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| EXAMINER |
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FLETCHER, JAMES A

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| ART UNIT | PAPER NUMBER |
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2621

DATE MAILED: 09/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/877,006

Applicant(s)

MIO ET AL.

Examiner

James A. Fletcher

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 3-5, 7-11 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 3-5, 7-11 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>7/10/6</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's Representative has provided persuasive arguments for the withdrawal of finality of the previous office action.
2. Applicant's arguments filed 1 September 2006 have been fully considered but they are not persuasive.

In re page 9, Applicant's Representative states: "Although Sakazaki may disclose recording information relating to the number of deleted packets, nowhere n Sakazaki is there any disclosure of recording a control packet which includes the discarded packet count in the same format as the program packet as originally recited in dependent claim 6, and now recited in claim 1 [sic]."

The Examiner respectfully notes that although Sakazaki et al do not explicitly disclose the format of the discarded packet count control packet, there is no reason to believe they created a special format for those packets, in light of a lack of disclosure, suggestion, or teaching to that effect.

The Examiner further notes that Sakazaki's packet count packet, being packetized digital bits, meets the "same format as the program packet" recited in the claim, as noted in the previous office action.

In re page 11, Applicant's Representative states: "The mere fact that detecting the speed of an input signal by means of time management information maybe known in the art is not sufficient in and of itself to render claim 5 unpatentable over Sakazaki."

The Examiner notes that Sakazaki et al utilize a known signal format, in known ways, and among those known utilizations is the use of time management information in order to detect the speed of the input signal. The fact that Sakazaki et al felt that it was unnecessary to disclose this basic element of MPEG-TS data does not render the application patentably distinct over them.

In re page 12, Applicant's Representative states: "The mere fact that it is known to transmit MPEG-2 data streams with a stream management packet as the first packet is not sufficient in and of itself to render claims 8 and 9 unpatentable."

The Examiner again notes that details of a known signal and details of utilization of that signal need not be disclosed in a reference to be considered obvious over that reference. The reference does not disclose that the incoming signal is a varying voltage signal, yet a claim that the input signal was a varying voltage signal would be obvious to one of skill in the art. This is also true of the construction of MPEG-2 data streams as taught in Watkinson, and their intended utilization.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 3-4, 7-8, and 10-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Sakazaki et al (5,648,960).

Regarding claims 3 and 11, Sakazaki et al disclose a program recording and reproducing apparatus and method to which a stream of a plurality of time-division-multiplexed signals are inputted, comprising:

- extracting unit and step for extracting program packets of the predetermined coded program signals from the streaming signals (Col 4, lines 36-39 “The data extractor 2 extracts desired data from the different types of data contained within the input data packet stream and outputs the extracted data to a data combiner 4”);
- discarding other program signal packets in the streaming signal (Col 4, lines 44-46 “The deleted packet detector 3 extracts the number of the non-extracted data packets that are in contiguous sequence between extracted data packets”);
- recording the respective program packets and a discarded packet count corresponding to the number of packets discarded between two consecutively recorded program packets (Col 4, lines 51-52 “The data combiner 4 combines the extracted data and the information relating to the number of deleted packets” and Col 5, lines 11-12 “The output of the data combiner 4 is supplied to a recording circuit 5”);
- reading the coded program signals out of the recording unit (Col 5, lines 23-26 “The reproducing circuit 7...outputs the data to a data separator 8”);
- generating null packets corresponding to the discarded packet count (Col 5, lines 26-30 “The data separator 8 separates each of the extracted data

packets from the reproduced data and after separating the information relating to the number of deleted packets in contiguous sequence, outputs this information to a dummy packet inserter 9"); and

- converting the coded program signals read out after inserting null packets corresponding to the discarded packet count between the two consecutive program packets (Col 4, lines 37-39 "The data extractor 2 extracts desired data from the different types of data contained within the input data packet stream and outputs the extracted data to a data combiner 4" and Col 5, lines 54-57 "The dummy packet inserter 9 inserts a number of dummy packets, based on the number of the deleted packets in contiguous sequence, into the sequence of extracted data packets from the data separator 8");
- wherein the recording unit records one control packet structured in the same format as the program packet as substituted for discarded packet, thereby recording a discarded packet count of the packets discarded between two consecutive program packets (The Examiner notes that the MPEG2-TS claimed by the applicant is a packetized digital bit stream, which can be considered a format. The discarded packet count of Sakazaki et al is inherently packetized digital bits as well, satisfying the "same format" limitation. Fig. 2[h] shows the deleted packet count being inserted between stored packets).

Regarding claim 4, Sakazaki et al disclose a program recording/reproducing apparatus comprising a unit that detects a speed of the streaming signals based on the number of packets contained per unit time when receiving the streaming signals;

wherein the speed detecting unit outputs the program signals at the speed detected (Col 3, lines 40-46 “The extracted data and the information of the number of deleted packets in contiguous sequence is separated after being reproduced by the reproducing circuit. The output circuit outputs the extracted data while inserting dummy packets therebetween based on the information of the number of data packets in contiguous sequence. Thus, the resulting output data train contains extracted data at the same time intervals that such data was contained within the input data train”).

Regarding claims 7 and 13, Sakazaki et al disclose a program recording/reproducing apparatus wherein the recording unit records a discarded packet count of the packets discarded between two consecutive program packets at every interval therebetween, thereby recording a discarded packet count of the packets discarded between two consecutive program packets (Fig. 2[h] shows the deleted packet count being inserted between stored packets).

Regarding claim 8, Sakazaki et al disclose a program recording and reproducing apparatus to which a stream of a plurality of time-division-multiplexed signals are inputted, comprising:

- extracting unit for extracting program packets of the predetermined coded program signals from the streaming signals (Col 4, lines 36-39 “The data extractor 2 extracts desired data from the different types of data contained

within the input data packet stream and outputs the extracted data to a data combiner 4");

- recording unit that records the respective program packets and a discarded packet count corresponding to the number of packets discarded between two consecutively recorded program packets (Col 4, lines 51-52 "The data combiner 4 combines the extracted data and the information relating to the number of deleted packets" and Col 5, lines 11-12 "The output of the data combiner 4 is supplied to a recording circuit 5");
- reading unit that reads the coded program signals out of the recording unit (Col 5, lines 23-26 "The reproducing circuit 7...outputs the data to a data separator 8");
- converting the coded program signals read out after inserting null packets corresponding to the discarded packet count between the two consecutive program packets (Col 5, lines 54-57 "The dummy packet inserter 9 inserts a number of dummy packets, based on the number of the deleted packets in contiguous sequence, into the sequence of extracted data packets from the data separator 8");
- wherein the recording unit records one control packet structured in the same format as the program packet as substituted for discarded packet, thereby recording a discarded packet count of the packets discarded between two consecutive program packets (The Examiner notes that the MPEG2-TS claimed by the applicant is a packetized digital bit stream, which can be

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considered a format. The discarded packet count of Sakazaki et al is inherently packetized digital bits as well, satisfying the "same format" limitation. Fig. 2[h] shows the deleted packet count being inserted between stored packets).

Regarding claim 10, Sakazaki et al disclose a program recording/reproducing apparatus wherein the recording unit records each program packet and the discarded packet count of the packets discarded between the two consecutive program packets on a magnetic tape, a magnetic disk, or an optical disk (Col 4, lines 27-28 "This embodiment is specifically applied to the 6-mm type digital VTR").

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakazaki et al.

Regarding claim 5, Sakazaki et al disclose a program recording/reproducing apparatus wherein the speed converting unit outputs the coded program signals at the speed detected (Col 3, lines 43-46 "it becomes possible to make a transmission rate at prescribed time intervals of the output data train from the output circuit at a rate based on the rate of the input data train").

Sakazaki et al are silent on the method used for determining the speed of the streaming signals.

The Examiner takes official notice that detecting the speed of an input signal for recording and reproduction purposes by means of time management information is notoriously well known, widely used, and commercially available, citing the Presentation Time Stamps defined in the MPEG-2 specification as that time management information.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sakazaki et al in order to specify using time management information from the input data stream to determine an output data rate.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakazaki as applied to claims above, and further in view of Watkinson (MPEG-2, 1999).

Regarding claim 9, Sakazaki et al disclose a program recording/reproducing apparatus wherein the incoming stream conforms to MPEG specifications, suggesting conformance with such standards, but does not specifically disclose that the recording unit records a stream management packet as a first recording packet of the predetermined coded program signal or that an I-frame would be the first frame recorded subsequently to the management data

Watkinson teaches MPEG-2 storing a packet stream wherein a stream management packet is the first recorded packet (Page 224, Figure 6.4 shows a set of PES packets, headed by a pack header which "contains a clock reference code" or management data).

As suggested by Sakazaki et al and taught by Watkinson, a recording of an MPEG stream is headed by management data.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Sakazaki et al in order to specify the first recording packet being a stream management packet.

Watkinson also teaches MPEG-2 groups of pictures as starting with an I frame, allowing P and B frames a reference from which their prediction can function (Page 184, Figure 5.22 shows an MPEG signal consisting of several groups of pictures, allowing interceded P frames to predict from the I frame).

As suggested by Sakazaki et al and taught by Watkinson, I frames are known to be the first frames that can be decoded and therefore would be the first frames of any value to be recorded on a medium.

Therefore, it would have been obvious to modify Sakazaki et al to record an I frame first after management data.

Conclusion

8. Applicant's amendment dated September 1, 2006, by adding limitations regarding the structure of the recorded control packet, necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fletcher whose telephone number is (571) 272-7377. The examiner can normally be reached on 7:45-5:45 M-Th, first Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Groody can be reached on (571) 272-7950. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAF
11 September 2006


James J. Groody
Supervisory Patent Examiner
Art Unit 262 2621